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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/693,814	10/24/2003	Ke Yu Chang	1087-PROT0004	1090

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EXAMINER

RAHMJOO, MANUCHER

ART UNIT	PAPER NUMBER
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2628

DATE MAILED: 06/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/693,814

Applicant(s)

CHANG, KE YU

Examiner

Mike Rahmjoo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 April 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-28 is/are pending in the application.
- 4a) Of the above claim(s) 28 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1- 28 are rejected under 35 U.S.C. 102(b) as being anticipated by Tamama et al (US PAP 2002/ 0135683), hereinafter, Tamama.

As per claims 1, 12 and 28 and as to the broadest reasonable interpretation by examiner, Tamama teaches a lumina filter path (corresponding to the filter path of fig. 14 and 27) coupled to receive blocks of RGB formatted data and generate a block of lumina data, wherein the lumina path filter includes an interpolation filter (fig. 14 and 27 blocks 1406 and the CFA interpolation filter) and a RGB to Y conversion (fig. 14 block 1412) see for example paragraph [0370] for the generation of the lumina data; and a chroma filter path (corresponding to the filter path of fig. 14 and 27) coupled to receive the blocks of RGB formatted data and generate blocks of chroma data wherein the chroma filter path includes an interpolation filter (fig. 14 an 27 blocks 1406 and CFA interpolation filter) and a RGB to UV conversion (fig. 14 block 1412) see for

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example paragraph [0370] for the generation of the chroma data; wherein the lumina filter path and the chroma filter path operate in parallel see for example figures 1c, 14 and 27 and paragraph [0370] for the filter paths (Y and UV independent of each other corresponding to parallel operation) operating in parallel.

As per claim 3 Tamama teaches the interpolation filter includes a 5- tap vertical filter and a 5- tap horizontal filter see for example figures 30 and 35 and paragraph [0325] for K tap filtering and paragraph [0380] for 5 tap interpolation.

As per claim 4 Tamama teaches gamma correction see for example paragraphs [0051- 52] and figures 1c, 14 and 27 for the gamma correction.

As per claim 5 Tamama teaches an edge enhancement filter see for example paragraph [0110] and figures 1c, 14 and 27 for the edge enhancement.

As per claim 6 Tamama teaches a spatial filter see for example paragraph [0143] for spatial filtering.

As per claim 7 Tamama teaches the chroma filter path includes an interpolation filter and an RGB to UV conversion see for example paragraph [0132] and figures 1c, 14 and 27.

As per claim 8 Tamama broadly teaches the interpolation filter includes a 7- tap vertical and 7- tap horizontal filter see for example figures 30 and 35 and paragraph [0325] for K tap filtering.

As per claim 9 Tamama teaches the chroma filter path further includes color correction see for example paragraph [0099] and figures 1c and 27.

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As per claim 10 Tamama teaches the chroma filter path further includes gamma correction see for example paragraph [0132] and figure 27 for the gamma correction.

As per claim 11 Tamama teaches the chroma filter path further includes core chroma correction see for example paragraphs [0106- 107 and 109] and fig. 27 for the color correction broadly corresponding to core chroma correction.

As per claim 13 Tamama teaches receiving a block of RGB video data includes receiving a 24 by 24 block of pixel data see for example paragraphs [0334- 0335] and claim 6 for the M by N pixel image.

As per claim 14 Tamama teaches receiving a block of RGB video data includes adjusting the numerical values in the block for black clamp values see for example paragraphs [0064-0065] and fig. 3a.

As per claim 15 Tamama teaches receiving a block of RGB video data includes performing a white balance operation on the block of RGB video data see for example paragraphs [0074] and [0078] for white balance.

As per claim 16 Tamama teaches filtering the block of RGB video data through a lumina filter path includes interpolating the RGB data to form red, green and blue color planes with interpolated values associated with the appropriate color in each pixel location of the red, green and blue color planes see for example paragraph [0109] for the interpolation and color correction in RGB color space.

As per claim 17 Tamama teaches generating the lumina Y data block from the red, green and blue color planes see for example paragraph [0370] and figures 1c, 14 and 27 for the generation of lumina data from RGB.

As per claim 18 Tamama teaches performing a gamma correction on the lumina Y data block see for example paragraph [0370] and figures 1c, 14 and 27 for gamma correction on the lumina data.

As per claim 19 Tamama teaches performing an edge enhancement on the lumina Y data block see for example paragraphs [0111] and [0114] for the edge enhancement on the lumina data.

As per claim 20 Tamama teaches spatially filtering the lumina Y data block see for example paragraph [0071] for adjustment of the brightness of each pixel as a function for its spatial location.

As per claim 21 Tamama teaches filtering the block of RGB video data through a chroma filter path includes interpolating the RGB data to form red, green and blue color planes with interpolated values associated with the appropriate color in each pixel location of the red, green and blue color planes see for example figures 28- 38 for interpolating the RGB data to form red, green and blue color planes with interpolated values associated with the appropriate color in each pixel location of the red, green and blue color planes.

As per claim 22 Tamama teaches interpolating the RGB data includes applying a vertical filter and applying a horizontal filter to the RGB video data block see for example paragraphs [0370] and [0374] for the application of the vertical and horizontal filters to the RGB color data.

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As per claim 23 Tamama broadly teaches the vertical filter and the horizontal filter each include a 7-tap filter see for example paragraphs example figures 30 and 35 and paragraph [0325] for K tap filtering.

As per claim 24 Tamama teaches determining U and V data blocks from the red, green and blue color planes see for example paragraphs [0132] and [0370] and figures 1c, 14 and 27 for the UV data from RGB data.

As per claim 25 Tamama teaches performing a color correction on the red, green and blue color planes see for example paragraphs [0099] and figures 1c and 27 for the color correction.

As per claim 26 Tamama teaches performing a gamma correction on each of the red, green and blue color planes see for example paragraph [0132] and figure 27 for the gamma correction.

As per claim 27 Tamama teaches performing a core chroma correction on the U and V data blocks see for example paragraph [0106- 107 and 109] and fig. 27 for the color correction broadly corresponding to core chroma correction.

Response to Arguments

Applicant's arguments filed 04/26/2006 have been fully considered but they are not persuasive.

As per applicant's remarks on page 6, applicant argues as per claim 1 "Tamama does not disclose or suggest a RGB to YUV filter having an interpolation filter *within* a lumina filter pat that includes RGB to Y conversion"

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and as per claim 10 (and also claim 12 on page 7 of the remarks) "Tamama does not disclose gamma correction within a chroma filter path that includes a RGB to UV conversion".

Examiner respectfully disagrees.

Examiner considers the filter path in fig. 24 and 27 as corresponding to a lumina filter path and a chromina filter path which include an interpolation filter (fig. 14 block 1406) and RGB to Y converter (fig. 14 block 1412).

As per applicant's remarks on pages 6- 7, applicant argues features of claims 7 and 19 as not being present in Tamama without point out how and why they differ from the cited portions of the primary reference used for rejection.

Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Inquiry

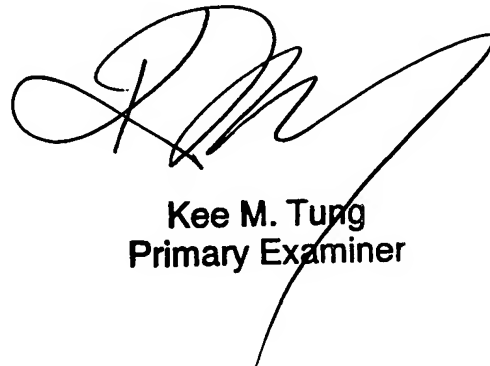
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mike Rahmjoo whose telephone number is 571-272- 7789. The examiner can normally be reached on 8 AM- 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kee Tung can be reached on 571-272-7794. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Mike Rahmjoo

February 17, 2006



Kee M. Tung
Primary Examiner